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The unique force structure of the United States Marine Corps represents one of the most versatile and operationally agile tools available to the nation's defense. Although the concept for the future of the Marine Corps' armored forces, beyond 2025, is yet unclear to the institution, it could be greatly enhanced by reorganizing its armored vehicle and engineer units into several Combined Armor Regiments. The introduction of the Combined Armor Regiment would ensure the Marine Corps is capable of answering the nation's call when an expeditionary armored force is needed to fight and win future armed contingencies involving major combat operations. The future armored ground combat vehicle(s) of the U.S. Marine Corps will be lightweight, lethal and survivable, combining strategic mobility and tactical agility to out maneuver and out gun any adversary. In order to match the capabilities of the future vehicle with the flexibility of its employment, it is vital that the U.S. Marine Corps streamline its force in a commensurate fashion.

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MASTER OF MILITARY STUDIES

"THE COMBINED ARMOR REGIMENT: THE FUTURE OF USMC ARMOR?"

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOT HE DEGREE OF
MASTER OF MILITARY STUDIES

MAJOR ANTHONY J. BANGO

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EXECUTIVE SUMMARY

Title: "The Combined Armor Regiment: The Future of USMC Armor?"

Author: Major Anthony J. Bango, United States Marine Corps

Thesis: The unique force structure of the United States Marine Corps represents one of the most versatile and operationally agile tools available to the nation's defense. Although the concept for the future of the Marine Corps' armored forces, beyond 2025, is yet unclear to the institution, it could be greatly enhanced by reorganizing its armored vehicle and engineer units into several Combined Armor Regiments. The introduction of the Combined Armor Regiment would ensure the Marine Corps is capable of answering the nation's call when an expeditionary armored force is needed to fight and win future armed contingencies involving major combat operations.

Discussion: In 1992, the Commandant of the Marine Corps, General Carl E. Mundy, Jr. commissioned a planning group to restructure the Marine Corps, anticipating a congressionally mandated reduction in the overall personnel end strength of the Marine Corps. It was during this time that the framework and concept for the first Combined Armor Regiment (then referred to as the Combined Arms Regiment) came into being. Past research by Marine Corps combat developers has proven that units like a Combined Armor Regiment can clearly provide greater flexibility and efficiency in the employment of armored forces in an expeditionary and amphibious environment, spanning the Range of Military Operations.

The transformation of the Marine Corps' armored forces is inevitable. The U.S. Army is continuing to develop the Future Combat System (FCS) as a wholesale replacement to its fleet of ground combat armored vehicles. The U.S. Marine Corps is doing the same with the Mine Resistant Ambush Protected Vehicle (MRAP), the Expeditionary Fighting Vehicle (EFV), the Marine Personnel Carrier (MPC), and the Joint Light Tactical Vehicle (JLTV) at great cost both fiscally and in terms of strategic and operational mobility. Irrespective of the interim vehicles that are brought on line to plug current capability gaps, the Combined Armor Regiment will give MAGTF commanders instant employment and deployment options not currently enjoyed by today's force (as most of these units are not operationally ready to conduct Major Combat Operations [MCO] due to years of fighting in Iraq and Afghanistan). Additionally, with a ready-made force structure firmly in place well before 2025, the Combined Armor Regiment would pave the way for the implementation of future armored combat vehicles for generations to come, especially when fielding the future force comes to fruition. The Combined Armor Regiment will facilitate a seamless phasing out of old platforms and the phasing in of the future platform(s).

Conclusion: As stated by the Commandant of the Marine Corps, the future force of the Marine Corps will be "Light, Lethal, and Austere" with the ability to operate at both ends of the spectrum of conflict. Expeditionary armored forces are central to the U. S. Marine Corps' vision of the future force structure beyond 2025. Likewise, the future armored ground combat vehicle(s) of the U.S. Marine Corps will be lightweight, lethal and survivable, combining strategic mobility and tactical agility to out maneuver and out gun any adversary. In order to match the capabilities of the future vehicle with the flexibility of its employment, it is vital that the U.S. Marine Corps streamline its force structure in a commensurate fashion. The answer: The Combined Armor Regiment.

The unique force structure of the United States Marine Corps represents one of the most versatile and operationally agile tools available to the nation's defense. The Marine Corps has retooled its force structure significantly over the course of the last seventy years to adapt to ever-changing threats to the security of the United States. Armored forces have been an integral component to the force structure of the Marine Corps since the codification of its contemporary amphibious doctrine in the 1930's.[1] Although the concept for the future of U.S. Marine Corps armored forces, beyond 2025, is yet unclear to the institution, it could be greatly enhanced by reorganizing its armored vehicle units into several Combined Armor Regiments (CAR). The introduction of the Combined Armor Regiment is one option for the future of Marine Corps' armored combat formations and their associated roles and missions in meeting the demands of potential adversaries and threats to the security of this nation.

BACKGROUND:

The concept for a Combined Armor Regiment as the "decisive force" for contingency operations is certainly not new. In 1992, the Commandant of the Marine Corps, General Carl E. Mundy, Jr. commissioned the Force Structure Planning Group (FSPG) to restructure the Marine Corps, anticipating a reduction in the overall personnel end strength of the Marine Corps.[2] The FSPG created the framework for the first Combined Armor Regiment (referred to as the Combined Arms Regiment in the FSPG study) embedded within each active duty Marine Division. The FSPG's charter was two-fold: first to respond to an earlier armored mobility study, that identified deficiencies for the infantry in the Gulf War, and second, to identify a means to retain force structure.[3] By August of 1992, the Commandant of the Marine Corps endorsed the FSPG recommendations, subsequently calling on the Fleet Marine Force to provide recommended changes to the organizational structures developed by the Marine Corps Combat

Development Command (MCCDC).[4] The 8th Marine Regiment, in coordination with 7th Marine Regiment, developed a Table of Organization (T/O) to man and equip the CAR. Unfortunately, changes to the force structure, such as a congressionally mandated 177,000 Marine Corps personnel end strength and significantly reduced fiscal resources, ultimately precluded the implementation of MCO 5401.5.[5]

Past research by the Marine Corps combat developers has proven that units like a Combined Armor Regiment can clearly provide greater flexibility and efficiency in the employment of armored forces in an expeditionary and amphibious environment, spanning the Range of Military Operations (ROMO).[6] The Initial Capabilities Document (ICD) for Marine Expeditionary Armored Forces (EAF) Draft 4.0 outlines the current requirement for the Marine Corps to become more interoperable and capable in the future joint operating environment.

Several very important questions presently remain unanswered with regard to the viability of the Combined Armor Regiment. Should the concept of consolidating all U.S. Marine Corps armor and engineer units into several Combined Armor Regiments be implemented into the force structure, and how will such units be integrated into the Marine Air Ground Task Force (MAGTF) construct? To better understand the Marine Corps' future armored force requirements, and direction for achieving these capabilities a review of the ICD for Marine Corps EAF Draft 4.0 is essential. The following is a synopsis of the ICD:

"Marine expeditionary forces continue to be called upon to project force across the full spectrum of the Range of Military Operations (ROMO)...The 2006 Office of the Secretary of Defense (OSD) Strategic Planning Guidance (SPG) further shapes this need by directing the Marine Corps to consider balanced expeditionary maneuver capability alternatives for addressing both traditional and irregular threats..." [7]

The Joint Capabilities Board (JCB) approved the EAF ICD in the fall of 2007. In the end, the idea of an EAF became the keystone for a range of vehicles that spanned every aspect of the MAGTF's Ground Combat Element (GCE) and addressed the widest range of military operations.

The central themes of the EAF ICD were that the less-lethal ROMO (irregular warfare [IrW]) was to be addressed by the Joint Light Tactical Vehicle (JLTV) family of vehicles, and the Marine Personnel Carrier (MPC). The higher ROMO spectrum would incorporate the use of the Expeditionary Fighting Vehicle (EFV). The operational concept for JLTV would replace the HMMWV at a 1:1 ratio and would be capable of carrying a reinforced rifle squad in three vehicles (a divergent force construct from the traditional two and four vehicle sections doctrinally accepted in the USMC armor community). The MPC would be the "balanced" platform for MAGTF GCE mobility (in both IrW and the conventional campaign) with the ability to carry a reinforced rifle squad in two vehicles. The EFV would complete the triad of vehicles and carry a reinforced rifle squad per vehicle.[8]

The EAF concept is centered on the JLTV, MPC, and EFV, each of which address the payload, protection, and performance requirements for the future force as defined by Combat Development & Integration (CD&I also known as MCCDC) HQMC.

Procurement funding and Marine Corps' Top-line Budget problems: The JLTV is an Army-led program to replace the aging High Mobility Multi-purpose Wheeled Vehicle (HMMWV) Family of Vehicles (FoV). The U.S. Army acknowledged in late-2008/early-2009 that they could not afford to replace - at a ratio of 1:1 - HMMWVs (estimated at $185k per vehicle) with JLTVs (estimated at $475k per vehicle). The Marine Corps had placed funding in the Program of Memorandum (POM) to address the JLTV Category B variant, which is known

also as the Combat Tactical Vehicle (CTV) or troop carrier variant. During this time, Mine Resistant Ambush Protected (MRAP) vehicles were also being procured, and Commandant General James Conway voiced concerns over the size and weight growth of the Ground Combat Tactical Vehicle (GCTV) fleet. Projected JLTV sizes and weights were not much better. All were heavier than even the heaviest HMMWVs, such as the M1151, M1152, M1165, and M1167 HMMWV variants.[9]

Early on in the process, CD&I began advocating a 1:1 ratio replacement of HMMWVs with JLTVs. Program Assessments and Evaluation Division (PA&E), from the Programs and Resources (P&R) Department of HQMC queried CD&I on how many HMMWVs they were planning to replace: The answer was approximately 24,930. The Marine Requirements Oversight Council (MROC) directed Approved Acquisition Objective (AAO) at that time was 19,280. CD&I was then instructed to re-verify the "new" AAO and brief the MROC. Subsequently, the MROC approved the "new" AAO in arrears.[10]

In a parallel effort, CD&I was also developing funding for the MPC. The funding for MPC was initially the amount of money the Marine Corps saved by reducing the EFV AAO from 1,013 to 573 for two Marine Expeditionary Brigades (MEB) worth of amphibious lift (two x MEBs is the Marine Corps' baseline contribution for Joint Forcible Entry Operations [JFEO]).[11]

During the Program Objective Memorandum-10 (POM-10) deliberations (late-2007, early-2008), the requirement for the MPC once again came under heavy scrutiny from the resource (P&R) and operational concept (PP&O) departments at HQMC. Under pressure from P&R and PP&O, the Assistant Commandant of the Marine Corps called an executive session of the MROC in early April 2008 and pushed the MPC program timeline two more years into the

future. LtGen Richard Natonski's (Deputy Commandant, PP&O) argument was the same as LtGen John Castellaw's (Deputy Commandant, P&R): The Marine Corps had "already bought" armored vehicles to carry Marines – Amphibious Assault Vehicles (AAVs) for the conventional campaign fight; MRAPs for the IrW fight; and Medium Tactical Vehicle Replacement (MTVR) w/ Marine Armoring System (MAS) kits for all others not requiring AAVs or MRAPs.[12] CD&I countered with the argument that the platforms were not "balanced" enough for the future hybrid threat. In the spring of 2008, CD&I hosted several Doctrine, Organization, Training, Materiel, Leadership, Personnel, and Facilities (DOTMLPF) analysis sessions with subject matter experts (SMEs) in Reston, VA. The results of these DOTMLPF sessions showed that the MPC would fill an operational lift capability gap created by the reduced procurement of the EFV, and that the MPC for maintenance, training and organizational purposes would be best placed in the AAV Bn in order to accommodate the new mission of MAGTF GCE protected mobility.[13]

To put this all into perspective, over the next 10-15 years, the AAV Bn will add an MPC company while concurrently replacing its four line companies with three EFV companies. The final task organization of an AAV Bn is planned to be three EFV companies and one MPC company. For a period of eight years, the AAV Bn will be responsible for maintaining three completely different types of vehicles while training to three very different technical and employment standards; well before the vehicle platform transition is complete.[14]

With regard to the EFV maneuverability, a recent study of vehicle surface pressures across planned landing beaches (for the conventional campaign) show that regardless of vehicle type the last 10 miles of amphibious surface transit must be done at low water speed.[15] The engineering specifics between EFV and the Amphibious Assault Vehicle (AAV) show little difference in this arena with regard to their respective approach speeds, and therefore

marginalize the EFVs high water speed capability. Secondly, the EFVs projected best reliability is worse than that of the older AAV. Only one of 1,057 legacy AAVs, newly rebuilt under the Reliability, Availability, Maintainability/Rebuild to Standard (RAM/RS) program, failed depot-level maintenance efforts (a result of hull fatigue).[16] It is assessed that the hull of the legacy AAV fleet will enjoy a 50-year lifespan similar to the B-52 Bomber.[17]

Given current fiscal constraints, the Marine Corps simply does not have enough money to procure all these vehicle platforms. For instance, EFVs will cost $18.5M each, and will not begin fleet service until 2015.[18] The total procurement of 573 EFVs purchased will not be in service until 2025. By the time these vehicles are completely fielded they could require upgrades for obsolete systems. Approximately 106 of the total 573 EFVs purchase are slated for the Maritime Pre-positioned Force (MPF). This decision has the potential to create a deficit in operational lift within the operating forces.[19] In contrast, AAVs have not been used operationally in nearly two years now, except for MEU deployments, and all 1,057 AAVs are RAM/RS complete. Additionally, P&R has assessed that the legacy AAVs can be "gold-plated" with a cannon and all the survivability of an EFV for approximately $6.8M a copy. This represents a cost savings of more than eleven million dollars per vehicle.[20]

STRATEGIC SETTING:

The CMC's Vision Statement from the Marine Corps Vision and Strategy 2025 publication represents the construct and warfighting capabilities of the future Marine Corps. The bold text in the Commandant's Vision Statement emphasizes his desire to transform the Marine Corps into a "leaner, more versatile and innovative" force.[21]

The Marine Corps of 2025 will fight and win the nation's battles with multi-capable MAGTFs, either from the sea or in sustained operations ashore. Its unique role as the Nation's

force in readiness, along with the values, enduring ethos, and core competencies, will ensure the Corps remains highly responsive to the needs of combatant commanders in an uncertain environment and against irregular threats. The future Marine Corps will be increasingly reliant on naval deployment, preventative in approach, "leaner in equipment, versatile in capabilities, and innovative in mindset." In an evolving and complex world, the Marine Corps will excel as the Nation's expeditionary force of choice." [22] Additionally, as noted in the Marine Corps Operating Concepts for a Changing Security Environment, then Deputy Commandant for Combat Development and Integration (CD&I), General James N. Mattis alluded to future reorganization of the Marine Corps in order to provide a broader better suited capability to the Combatant Commander by "establishing additional sizing options for the MAGTF, and other Marine Corps Forces...to provide a greater number of available units for forward presence, security cooperation, and counterterrorism."[23] Capabilities such as force projection, rapid deployment, force closure, seabasing, and operational maneuver from the sea are firmly embedded as part of a commonly accepted strategy of the United States Marine Corps.[24] It is especially important for the Marine Corps to be able to adapt to these enduring requirements as security challenges evolve and potential adversaries become more capable. The Combined Armor Regiment (when properly organized and equipped) can conduct assigned missions in this ever-changing security environment.

The Combined Armor Regiment would bring LAR, Tanks, AAVs and Engineers (all normally "separate" battalions) under a single O-6 commander, and therefore, alleviate the Assistant Division Commander from direct oversight of these units. This would leave only Headquarters and Recon Bns as the separate battalions within the Division. If Headquarters Bn remains an O-6 level command, then Recon Bn could be absorbed under that battalion while still

maintaining the O-5 level command for the Recon Bn Commander. Similar structure is already in place within the MEF HQ Group (MHG), whereby the Intelligence Bn and Communications Bn are both headquartered under the O-6 level commander of the MHG but retain an O-5 commander as their respective Battalion Commanders.[25]

The Combined Armor Regiment would be the high-intensity "second fist" for the CMC's "two-fisted" fighter construct, "...able to destroy enemy formations with scalable air-ground-logistics teams in major contingencies, but equally able to employ our hard earned irregular warfare skills honed over decades of conflict." [26] The Commandant of the Marine Corps envisioned three "balanced" MEFs under the 202K personnel end strength increase. However, the Combined Armor Regiment was not part of that increase, so good planning and due diligence would be required to ensure that this part of his vision is achieved. For example, the 1st Marine Division would be home to the 1st Combined Armor Regiment; the 2nd Marine Division would be home to the 2nd Combined Armor Regiment; 3rd Marine Division would be home to the 3rd Combined Assault Battalion (3rd Marine Division is two-thirds smaller than both 1st and 2nd Divisions); and lastly the 4th Marine Division would be home to the 4th Combined Armor Regiment.

Doctrine, organization, training, maintenance, facilities, and leadership would be centralized without "institutionalizing" armor across the Marine Corps. The Combined Armor Regiment would allow the Marine Corps to avoid inextricably joining armor to infantry units. Thus, maintaining the Commandant's vision to keep the force light yet lethal. The Combined Armor Regiment would help avoid the propensity to "mechanize" the entire force such as the U.S. Army has done (to their detriment) making them an even heavier force, that is increasingly less mobile (strategically and operationally). A good example of this in the Marine Corps is the

growth of the infantry battalion from 61 vehicles prior to OIF to now 93 vehicles, many of which are the relatively heavy Mine Resistant Ambush Protected vehicles.[27] The Marine Corps, institutionally, would remain the flexible (sea - air - land) force for which it is known, Naval in character, expeditionary in nature, and able to operate as a MAGTF in any contingency.[28]

After OIF, and a leveling of the U.S. military's commitment to OEF, newly procured equipment for these campaigns will need an organizational home (unit) within the Marine Corps. Putting it all into storage will cost the American taxpayer dearly, and will jeopardize the "corporate warfighting knowledge" gained since 2001.

ANALYSIS:

In the early 1990's Marine Corps Combat Development Command conducted an analysis of the capabilities of a "Combined Arms Regiment." The study was executed against projected threat criteria, using the heavy cavalry regiments of the U.S. Army as a basis for comparison.[29] The outcome of the study showed that the Combined Arms Regiment (which consolidated much of the Marine Corps' armor) was in fact a viable, in terms of force projection capabilities within the context of major contingency operations, with some limitations, however. Most notably, the nation lacked the Strategic Air assets to move this Regiment, and much of the Combined Arms Regiment's vehicles lacked the ability to move from ship to shore as the preponderance of its equipment was not amphibious.[30] The primary use of the Combined Armor Regiment as a decisive force was validated. Additionally, it was widely accepted that this force was well suited for reconnaissance and security force missions. The one component of the study that ultimately ended in the demise of the Combined Armor Regiment was the recognition that such a force would require a large part of the Marine Corps' budget to man, train, organize and equip.[31] This was deemed and unacceptable risk, at a time when the Marine Corps was looking at drawing

down. Ultimately, the concept was shelved, and the Marine Corps went forward into the 21st century with the status quo force structure of the past 25 years.

While the U.S. Army continues to develop the FCS as a wholesale replacement to all of its ground combat armored vehicles, it is fielding the Stryker in order to give the current force increased capabilities. The U. S. Marine Corps is doing the same with the Expeditionary Fighting Vehicle and the potential addition of the Marine Personnel Carrier.[32] Irrespective of the interim vehicles that are brought on line to enhance warfighting capabilities and fill lift capability gaps, the Combined Armor Regiment will give MAGTF commanders the flexibility of employment and deployment options not currently enjoyed by today's force structure. With the CAR force structure already in place, it will, when the time comes, facilitate a seamless phasing out of old platforms and the phasing in of the future platform(s) and its associated roles and missions.

The Marine Corps' senior leadership has envisioned an upgrade to the current inventory of armored vehicles for nearly twenty years. Ultimately, a lightweight amphibious tank that could swim from ship to the shore and then maneuver landward with mounted infantrymen would be the ideal multi-use platform. But, attempting to combine all of these capabilities into a single platform is neither cost effective nor feasible in terms of height, weight and square dimension restrictions imposed by Navy amphibious shipping and the Marine Corps' expeditionary character.[33] The Marine Corps of the future will be expected to perform missions across the full range of military operations from high end warfare of a major combat operation to the low intensity conflict of counterinsurgencies to humanitarian assistance and disaster relief. The problem, as is usually the case, is budgetary constraints on the services and the Department of Defense. Current wars in Iraq and Afghanistan are draining the DoD's modernization coffers,

not just for the Marines but also for all of the uniformed services. The Marine Corps is also significantly affected by U.S. Navy's desire to invest more in carriers, planes and submarines vice their amphibious fleet.[34] The Marine Corps most likely will have to downsize its equipment ambitions, but so far the senior leadership insists that they will continue to fight the budget battles as long as necessary to ensure the next-generation weapons systems are funded. According to LtGen George Flynn (Deputy Commandant for CD&I), "There is an opportunity cost for what we are doing today in relation to what we need to do tomorrow. We cannot afford to be a one-trick pony."[35] LtGen Flynn further states the Marine Corps will have to respond to five likely challenges: disruptive threats, such as cyber attacks; catastrophic events, such as the use of a nuclear weapons; irregular forces from non-state actors to terrorists; traditional threats from peer competitors; and the most complex of all, threats which combine several of the above, perhaps three or four at the same time.[36]

Mr. T. X. Hammes of the Potomac Institute and Marine Colonel Phil Smith, Director of the Marine Corps Center for Irregular Warfare (CIW), have both stated that the Marine Corps should focus its long term training efforts more on counterinsurgency training operations and less on conventional operations. T. X. Hammes proposes a "60/40" split in training the current and future force of the Marine Corps. Devoting sixty percent of Marine Corps contingency training to counterinsurgency operations and forty percent of the training to conventional operations (also referred to as Major Combat Operations or MCOs).

These viewpoints are not without merit. From the fall of 2003 when the insurgency in Iraq erupted, to the present fight in Afghanistan, the Marine Corps has seen nearly seven years of continuous low intensity conflict and counterinsurgency fighting. Iraq and Afghanistan stand as somber testimonials to this "60/40" way of thinking about training Marines. However, it is

important to point out that seven years of fighting the counterinsurgency battles in Iraq and Afghanistan have come at a high cost in terms of core competencies. As a service, the Marine Corps' Core Competencies run across the entire spectrum of the Range of Military Operations. Planners at both Marine Corps Combat Development Command and Plans, Policies and Operations have assessed the Marine Corps' current ability to conduct a Major Combat Operation is significantly degraded, more specifically, in terms of core competencies the ability to conduct a Joint Forcible Entry Operation (JFEO) to standard, is very much in question (the CAR would mitigate this by being a dedicated force to the JFEO mission). While serving as the Deputy Commandant for PP&O, LtGen Richard Natonski, (now Commanding General of Marine Forces Command) argued vehemently to the Joint Staff that the Marine Corps had "lost" its ability to conduct Joint Forcible Entry Operations as a result of the Marine Corps' unbalanced fixation on fighting the counterinsurgency battles in Iraq and Afghanistan. Commandant of the Marine Corps, General James Conway, echoed LtGen Natonski's concerns to the Office of the Secretary of Defense and later codified his vision for balancing the Marine Corps' future capabilities in the Marine Corps Vision and Strategy 2025 publication.[37] General Conway describes the future Marine Corps as a two fisted fighter. This two-fisted fighter will have the ability to conduct low intensity/counterinsurgency operations with one fist, and major combat operations with the other fist.[38] Essentially, General Conway is describing a balanced force with the ability to conduct operations across the range of military operations.

The 2010 Quadrennial Defense Review (QDR) has set forth virtually the exact same way ahead for the entire Department of Defense that General Conway had previously described in his Marine Corps Vision and Strategy 2025 publication. The 2010 Quadrennial Defense Review

alone constitutes the institutional imperative to move forward with the concept of the Combined Armor Regiment. The 2010 Quadrennial Defense Review states the following:

The initiatives described in the QDR are designed to significantly enhance the ability of U.S. forces to protect and advance U.S. interests in both the near and longer term. In addition to better preparing U.S. military forces for the future, these initiatives will improve the Department's ability to build the capability and capacity of partners. Changes directed under the QDR can be broadly characterized by the following trends:

"That U.S. ground forces will remain capable of full-spectrum operations, with continued focus on capabilities to conduct effective and sustained counterinsurgency, stability, and counterterrorist operations alone and in concert with partners. Additionally, that U.S. naval forces likewise will continue to be capable of robust forward presence and power projection operations, even as they add capabilities and capacity for working with a wide range of partner navies."[39]

The Combined Armor Regiment would be the "heavy fist" of the two fisted fighter General Conway envisions as the future force for the Marine Corps. By consolidating all the armor and engineer assets into one unit (a regiment) designated for the heavy fist mission within the Marine Division, Armor and Engineer battalions can once again return to training to their traditional mission essential tasks.

By simply reorganizing units within the Marine Division the Marine Corps can quickly and efficiently balance its capabilities across the Range of Military Operations.

Presently, Armor and Engineer battalions are focused almost entirely on counterinsurgency operations. Light Armored Reconnaissance battalions, tank companies, amphibious assault vehicle companies, and engineer companies are all deploying in support of

the counterinsurgency fighting in Iraq and Afghanistan. All of these units execute a pre-deployment training program that includes a minimum of thirty days training at the Mojave Viper complex in Twenty-nine Palms, California. This is without question, vitally important training to these units given the nature and location of their deployments. However, it is not the best, nor is it the most judicious use of these units. As the "heavy fist" for the Marine Division, the Combined Armor Regiment would allow for a refocus of training back to traditional missions (tasks typically associated with executing a Joint Forcible Entry Operation) and be in keeping with the Commandant's Vision and Strategy for 2025, the 2010 Quadrennial Defense Review, and the Expeditionary Armored Forces Initial Capabilities Document. This simple realignment of units under a single Regiment in each Division would rebalance the Division's combat capabilities almost overnight. With the restructed Division in place, Infantry battalions and regiments would continue to train to missions as required whether it is focused on a counterinsurgency or major combat operations, and the Combined Armor Regiment would focus on training for major combat operations, yet still retaining the flexibility to augment counterinsurgency-like operations when necessary.

The Combined Armor Regiment is integral to the Joint Forcible Entry Operation as it will provide the majority of the units responsible for ship to shore movement (Amphibious Assault Vehicles and Expeditionary Fighting Vehicles).[40] Once ashore it would provide units that expand the lodgment and conduct reconnaissance forward of the Beach Landing Zones for follow on forces (Light Armored Reconnaissance and Engineer battalions). Once the lodgment has been sufficiently expanded the Combined Armor Regiment would provide the tanks and armored personnel carriers, similar to Mine Resistant Ambush Protected (MRAPs) vehicles (carrying infantrymen) to close with and destroy enemy main body forces.

There are many credible arguments that suggest procurement of technology is the answer to combating future threats. A review of this process reveals the tension and communication difficulties that exist within the Marine Corps as an institution between the operating forces, combat developers (requirements community), and budget managers. This system is unwieldy and takes time and resources to work successfully.

The cumbersome nature of the system is actually by design, as to avoid hastily fielding ill-conceived gear that is neither suitable nor acceptable to the operator that needs it. It is the function of the requirements community to first study then seek solutions (mainly material), to the Marine Corps' operational needs both real and perceived. Requirements officers work with the operating forces to help fill current and future capability gaps/needs. This system works most effectively when the operating forces generate a cohesive request for a need (via a needs statement) in order to execute, or in many cases better execute their assigned missions. The requirements officers at Marine Corps Combat Development Command then take the needs statement and study and research the need in order to first determine if it is in fact a real need and then find a piece of equipment or system to satisfy that need. Needs (capability gaps) can usually be satisfied with equipment from an existing inventory or procured commercially from a vendor or manufactured by the military industrial complex.[41] Regardless of where the piece of equipment to satisfy a need comes from, the Marine Corps' senior leadership must approve it before it can be purchased and procured. The body that makes those approvals is the Marine Requirements Oversight Council (MROC), chaired by the Assistant Commandant of the Marines Corps.[42] Upon approval by the Marine Requirements Oversight Council the request is passed to the Marine Corps' budget managers in the Program and Resources Department of HQMC. The Programs and Resources Department then allocates the money and opens a line of funding from

which the Marine Corps' acquisitions professionals can purchase and procure the equipment required to satisfy the original need. Thus, completing the cycle beginning with the identification of a need and ending with the fielding of an acceptable and suitable piece of equipment or system in the hands of the operator in the field.

In an MRAP fielding case study by Mr. Franz Gayl, the Science and Technology (S&T) Advisor to DC, PP&O HQMC he demonstrated that Marine Corps combat development organizations are currently not optimized to provide responsive, flexible, nor relevant solutions to commanders in the field. Mr. Gayl contends that The Marine Corps Combat Development Command should reorganize and reform in order to deliver relevant capabilities to field commanders in a timely manner. He further states that this reorganization should be fully transparent, including both operators and advocates, and be codified in legislation.[43] This concept is extremely important in demonstrating the effectiveness of the implementation of the Combined Armor Regiment. The Combined Armor Regiment is an immediate solution (force restructuring) vice a much longer term and riskier solution (technology based solution) in terms of the Marine Corps' readiness for future contingencies.

There is no doubt MRAPs saved many lives of Marines who may have otherwise died in the less protected armored HMMWV. For that, the nation should be forever grateful for the fielding of the MRAP. However, now the Marine Corps has a new problem on its hands. MRAPs were rapidly purchased and procured to protect Marines in the counterinsurgency fighting in Iraq where Improvised Explosive Devices (IEDs) and road side bombs were the weapons of choice. The current inventory of Marine Corps MRAPs sit in vast parking lots lying idle, neither being used in training exercises nor operationally, save for a handful of these vehicles in Afghanistan.[44]

MRAPs weigh as much as forty tons and have a V-shaped hull to protect troops riding inside from the devastating effects of an underbelly blast typically associated with an anti-tank mine. None of these factors, neither the weight, nor the V-shaped hull were taken into consideration when purchasing and fielding the MRAP for the fighting in Iraq. Granted, time was of the essence to protect Marines in Iraq with a better vehicle. However, the unfortunate byproduct of this rapid procurement is that the Marine Corps now owns over two thousand MRAPs and none of them can be transported in an amphibious landing ship because they are incapable of rolling on or off the ship's vehicle storage areas due to their V-shape hull.

Additionally, the extreme weight of these vehicles creates a whole new host of problems for Navy ship drivers who must plan meticulously as to not overload their ships. With the MRAPs being so heavy ships become overloaded well before combat cargo officers and load planners can maximize the square and cubic space of the ship. This essentially, would require more amphibious ships to carry the same amount of Marine equipment.

This further exacerbates the issue as the U.S. Navy has a finite number of amphibious ships. A number that is a point of contention between the Marine Corps and the U.S. Navy, as the Marine Corps, by doctrine, requires thirty-four amphibious ships to conduct a Joint Forcible Entry Operation with two Marine Expeditionary Brigades embarked.[45] Currently, the U.S. Navy does not possess thirty-four operational amphibious ships and is due to retire several aging vessels from this inventory. The Marine Corps and the U.S. Navy are virtually moving in opposite directions with regard to this requirement and the "niche vehicle" that the MRAP has become only compounds this problem.

The importance of studying examples of procurement failure such as the MOLLE pack and the MRAP vehicle is that it points to a recent and unsettling trend within the Department of

Defense to solve problems in the field with a new piece of gear or technology. The point here is not to say that technology does not have a place in the field, the point is that we must first look to innovations in tactics, techniques, procedures and structure before committing costly technologies that often time do not work as advertised or worse fill a "capability niche" that becomes obsolete once a campaign is over. Former President Dwight Eisenhower warned of the dangers of the military industrial complex. The current tendency to buy technology before the institution can look for innovative solutions from within speaks to those dangers. In the end institutional innovations will be far less expensive to the American taxpayer and far more useful to a new generation of American military leaders and troops in the field.

A realignment of units to configure the new Combined Armor Regiments across the Marine Corps would occur in three phases. Phase I (the Implementation Phase) would begin immediately and take place over the course of the next two to three years.

During Phase I the Regimental Headquarters will be formed and designated units will relocate. The Marine Corps Combat Development Command will be required to define the roles and missions of the newly formed Combined Armor Regiments to reflect combat support and reconnaissance tasks in support of the Marine Division or Ground Combat Element (GCE) of a MAGTF. This would be initially accomplished by writing a Mission Statement and Mission Essential Task List (METL) for the Regiment. A thorough review of existing mission statements and associated tasks for the LAR, Tank, AAV and Engineer battalions will assist and inform the process. Additionally, during this phase the Marine Corps can begin deploying Combined Armor units, likely company size, (Combined Armor Companies [CAC's]) with Marine Expeditionary Units headquartered under the GCE/Battalion Landing Team. A CAC would consist of an AAV platoon, an LAV platoon, a tank platoon and a combat engineer platoon.

It would be necessary for the regiments to have a headquarters company in each regiment similar to all other regimental organizations in the Marine Corps. Given this model the only structure the Marine Corps would be required to add would be one O-6 and his staff to command and control the regiment. The impact would be immediate, and the force would be balanced in its ability to fight both a conventional major combat operation and a low intensity, counterinsurgency-like fight. Additionally, it will be important for the Marine Corps to address the issue of the Service Life Extension Program (SLEP) and the impact it will have prior to Phase II transitioning to maximize the cost savings of the Combined Armor Regiment.

Phase II (Transition Phase) would begin immediately following the realignment of the Implementation Phase and could take up to ten to twelve years to complete as new technologies and equipment become available and are procured and fielded. The target end date for Phase II would be no later than 2025 in keeping with Commandant General James Conway's vision of the Marine Corps as a fighting force in that same year. Phase II will see the phasing out of legacy platforms with interim solutions, but key take away is that the Combined Armor Regiment would be fully capable of integrating into any one of the major contingency plans (per Phase I implementation), despite platform upgrades.

This phase will see the transition and introduction of the following platforms: AAV to the EFV; Gen I LAV to Gen III LAV (not yet an approved program); M1A1 to M1A2 (not yet an approved program); Introduction of newer, lighter MRAPs (Cougar, etc); Introduction of the Marine Personnel Carrier (not yet an approved program).

Phase III (Transformation Phase) constitutes the force beyond the year 2025. During this phase the force structure of the Combined Armor Regiment will be a well-established part of the Marine Corps as an institution. Roles and missions will be well defined, providing and excellent

conduit for the Marine Corps' transformation and transition to the fighting vehicles of the future. Platforms that today are still only a conceptual drawing such as the U.S. Armies Future Combat System family of vehicles. The EFV will be transformed into an upgraded amphibious assault vehicle. The future infantry fighting vehicle, the future armored reconnaissance vehicle and the future main battle tank will all come online and replace "legacy" fleet of equipment and will stand ready to continue to be the "heavy fist" of the "two fisted fighter" for the Marine Division.

Most importantly, the Combined Armor Regiment will give back to the Marine Corps and this nation the ability to defend itself in the event of a major combat operation contingency. This force will be an inherently ready and capable, able to repel any state or non-state actor who may threaten the national survival or interests of the United States of America.

CONCLUSION:

In November of 2009 at the Expeditionary Warfare Conference LtGen George Flynn, spoke passionately about Marine Corps Modernization, he is quoted as saying:

"The challenge I face day to day in the inbox is to support the warrior in the fight. But I also have to worry about the future, and how do I balance the two? That is the hard part of our responsibility right now."[46]

As stated by the Commandant of the Marine Corps, the future force of the Marine Corps will be "Light, Lethal, and Austere" with the ability to operate at both ends of the spectrum of conflict. Expeditionary armored forces are central to the U. S. Marine Corps' vision of the future force structure beyond 2025. The future armored ground combat vehicle(s) of the U. S. Marine Corps will be light, lethal and survivable, combining strategic mobility and tactical agility to out maneuver and out gun any adversary. In order to match the capabilities of the future vehicle

with the flexibility of its employment it is vital that the U.S. Marine Corps streamline its force structure in a commensurate fashion. The answer: The Combined Armor Regiment.

Notes:

[1] MCDP 1-0, *Marine Corps Operations*. Headquarters United States Marine Corps, (27 September 2001), 1-4.

[2] Major Martin M. Westphal, United States Marine Corps. *The Combined Arms Regiment: Evolution And Relevance*. Marine Corps Command and Staff College, 1995. Extracted from Global Security.org website on 21 Dec, 2009.

[3] Ibid.

[4] Ibid.

[5] Ibid.

[6] Ibid.

[7] MROC Decision Memorandum 07-2008, Subj: Initial Capabilities Document (ICD) for Expeditionary Armored Forces (EAF), 2.

[8] Personal Interview with Major Grayson T. Story of PA&E, P&R, HQMC (conducted 21 Jan, 2010).

[9] Ibid.

[10] Ibid.

[11] Ibid.

[12] Ibid.

[13] Ibid.

[14] Personal Interview with Major Grayson T. Story of PA&E, P&R, HQMC (conducted 22 Jan, 2010).

[15] Ibid.

[16] Ibid.

[17] Ibid.

[18] Personal Interview with Major Grayson T. Story of PA&E, P&R, HQMC (conducted 23 Jan, 2010).

[19] Ibid.

[20] Ibid.

[21] Marine Corps Vision and Strategy 2025, 9.

[22] Ibid.

[23] Marine Corps Operating Concepts For A Changing Security Environment, (January 2009), 16.

[24] Ibid.

[25] MCRP 5-12D, *Organization of Marine Corps Forces.* Headquarters United States Marine Corps, (13 October 1998), 6-5.

[26] Marine Corps Vision and Strategy 2025, 2.

[27] Personal Interview with Major Grayson T. Story of PA&E, P&R, HQMC (conducted 23 Jan, 2010).

[28] Marine Corps Vision and Strategy 2025, 2.

[29] Major Martin M. Westphal, United States Marine Corps. *The Combined Arms Regiment: Evolution And Relevance.* Marine Corps Command and Staff College, 1995. Extracted from Global Security.org website on 21 Dec, 2009.

[30] Ibid.

[31] Ibid.

[32] Personal Interview with Major Grayson T. Story of PA&E, P&R, HQMC (conducted 23 Jan, 2010).

[33] Personal Interview with Major Juan Ortiz of POE-50 (Amphibious Programs), PO, PP&O, HQMC (conducted 21 Jan & 26 Feb, 2010).

[34] Ibid.

[35] Comments from LtGen George Flynn, Deputy Commandant for Combat Development and Integration at the Expeditionary Warfare Conference, (November 2009).

[36] Ibid.

[37] Marine Corps Vision and Strategy 2025, 2.

[38] Ibid.

[39] 2010 Quadrennial Defense Review.

[40] Major Martin M. Westphal, United States Marine Corps. *The Combined Arms Regiment: Evolution And Relevance.* Marine Corps Command and Staff College, 1995. Extracted from Global Security.org website on 21 Dec, 2009.

[41] Franz J. Gayl, Science and Technology (S&T) Advisor, PP&O. *Mine Resistant Ambush Protected (MRAP) Vehicle Case Study.* (22 Jan 2008).

[42] Personal Interview with Major Grayson T. Story of PA&E, P&R, HQMC (conducted 23 Jan, 2010).

[43] Franz J. Gayl, Science and Technology (S&T) Advisor, PP&O. *Mine Resistant Ambush Protected (MRAP) Vehicle Case Study.* (22 Jan 2008).

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